

R^{11} is a straight-chain or branched alkyl or alkyloxy radical having 6 to 14 carbon atoms, where one or two $-CH_2$ -groups may be replaced by $-O-$ and/or $-C(=O)-$,

(III)



is 2-fluoro-pyridine-3,6-diyi

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is cyclohexane-1,4-diyi

R^{10} is a straight-chain or branched alkyl or alkyloxy radical having 6 to 14 carbon atoms, where one or two $-CH_2$ -groups may be replaced by $-O-$ and/or $-C(=O)-$ and one H atom may be replaced by F

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R^{12} is hydrogen or a straight-chain or branched alkyl or alkyloxy radical having 6 to 14 carbon atoms, where one or two $-CH_2$ -groups may be replaced by $-O-$ and/or $-C(=O)-$.

In a very particular embodiment of the very particularly preferred liquid-crystal mixture,

15 (II) is 5-alkyl-2-(4-alkyloxyphenyl)pyrimidine, 5-alkyl-2-(4-alkylcarbonyloxyphenyl)pyrimidine, 5-alkylcarbonyloxy-2-(4-alkyloxyphenyl)pyrimidine or 5-alkyl-2-(4-alkyloxy-2,3-difluorophenyl)pyrimidine

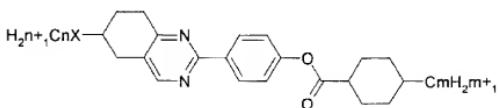
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and,

25 (III) R^{10} is a straight-chain alkyloxy radical having 6 to 14 carbon atoms, where one H atom is replaced by F
 R^{12} is hydrogen.

The chiral smectic liquid-crystalline mixture preferably comprises 10-60% of one or more compounds of the formula (I). The mixture particularly preferably comprises 10-60% of 1-15 compounds of the formula (I). The mixture particularly preferably comprises 10-60% of 1-15 compounds of the formula (I) and 40-90% of 2-15 compounds of the formula (II). In particular, the mixture comprises 10-60% of 1-15 compounds of the formula (I), 40-90% of 2-15 compounds of the formula (II) and 1-40% of 1-15 compounds from the group (III), (IV), (V), (VI) and (VII), the total amount being 100%. The percentages are by weight.

The invention furthermore provides compounds of the general formula (I), selected from the compounds of the formula (XX), where



n	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	
m	3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10	3	4	5	6	7
X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

n	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7	8
m	3	5	6	7	8	9	10	3	4	5	6	7	8	9	10	3	4	5	6	7	8
X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

n	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	10	10	10	10	10	10
m	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10	3	4	5	6	7	8
X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

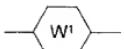
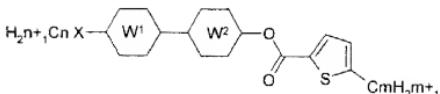
n	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4			
m	3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10
X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			

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n	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7	7			
m	3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10
X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			

n	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	10	10	10	10	10	10			
m	3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10	3	4	5	6	7	8	9	10
X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			

Compounds of the formula (XXI), where:



is 2-fluoropyridine-3,6-diyl, 4-fluoropyrimidine-2,5-diyl or phenylene-1,4-diyl or possibly pyridine-2,5-diyl, unsubstituted, mono-substituted or disubstituted by F



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10 with the provisos that a) one of the rings W^1/W^2 must be one of the nitrogen-containing heterocycles and n and m are preferably from 1 to 14 and X is -O- or a single bond. n can alternatively be an integer from 2 to 10 and m can be an integer from 3 to 10

or preferably

15 b) the grasping $\text{W}^1\text{-W}^2$ is undirected and is 3-fluorobiphenyl-4,4'-diyl or 2-fluorobiphenyl-4,4'-diyl, where n, m and X are as defined below

c) the grasping $\text{W}^1\text{-W}^2$ is undirected and is 2,3-difluorobiphenyl-4,4'-diyl, where n and m are from 1 to 14 and X is -O- or a single bond.